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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,407	02/25/2004	Rudolf Miki	21334-1309	3993

29450 7590 05/25/2005

BARLEY SNYDER, LLC
1000 WESTLAKES DRIVE, SUITE 275
BERWYN, PA 19312

EXAMINER

DONOVAN, LINCOLN D

ART UNIT PAPER NUMBER

2832

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,407

Applicant(s)

MIKL ET AL.

Examiner

Lincoln Donovan

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 5-9, the particular structure and arrangement of the "transition region" is unclear. Applicant should clarify whether the "transition" between the yoke and core and the specific cross-sectional area intended. Applicant should clarify the specific area where the "transition region" is.

Regarding claims 5-6, applicant should clarify the specific structure intended by "designed to be" and "designed so as."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14, as best understood in view of the rejections under USC 112, 2nd paragraph, are rejected under 35 U.S.C. 102(b) as being anticipated by Shibata et al. [US 5,945,900].

Regarding claims 1-2, 4 and 10-14 Shibata et al. disclose a relay [figure 1] comprising:

- a coil bobbin [figure 1];
- a yoke [25]; and
- a core formed of at least two core elements [24, figure 1] penetrating the coil bobbin and integrally formed with the yoke, the core having a transition region with the yoke with a cross-sectional area and a central region surrounded by the coil bobbin with a cross-sectional area, the cross-sectional area in the transition region at an end pole face being greater than the cross-sectional area in the central region of the core [figure 1].

Regarding claims 5-9, Shibata et al. discloses the core being formed of two core elements [24, figure 1] each designed so as to be substantially without an under cut and with at least one core element [24] having a non-uniform cross-sectional area designed to be insertable into the coil bobbin and the other core element being integrally formed with the yoke and substantially uniform and rectangular in cross-section.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. in view of Martino [US 5,084,688].

Shibata et al. disclose everything claimed except the core being tapered in a region surrounded by the coil bobbin.

Martino discloses a relay [1] having a core [5] with a tapered portion in a region surrounded by the a coil bobbin [figure 1].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to taper a region of the core of Shibata et al., as suggested by Martino, for the purpose of optimizing magnetic efficiency.

Response to Arguments

Applicant's arguments filed 03-11-05 have been fully considered but they are not persuasive.

Applicant argues that Shibata et al. fails to teach "a cross-sectional area in the transition region being greater than the cross-sectional area in the central region of the core." Applicant has not clearly defined the cross-sectional area intended or the transition region. Shibate et al. discloses a "transition region" [figures 1 and 5] having a cross-sectional area greater than the cross-sectional area of the core, as claimed.

Conclusion

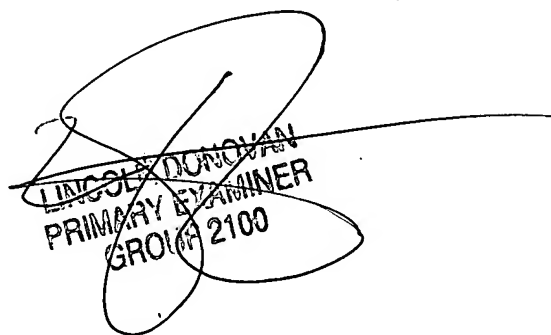
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lincoln Donovan whose telephone number is 571-272-1988. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ldd

A handwritten signature, possibly "LINCOLN DUNOVAN", is written over a rectangular stamp. The stamp contains the text "LINCOLN DUNOVAN", "PRIMARY EXAMINER", and "GROUP 2100".